

RUSKIN[®]

*Ceiling Radiation Dampers
for wood construction*



*Selection & Application Guide for Wood Truss
and Joist Floor/Ceiling or Roof/Ceiling Designs*

CFD APPLICATION

Ceiling Fire Dampers are used in air handling duct inlets/outlets that penetrate the ceiling membrane of UL rated fire resistive floor-ceiling and roof-ceiling assemblies. Also, the CFD7T may be installed in the ceiling membrane of such assemblies that utilize the ceiling cavity as a return air plenum.

CFD TESTING

Ceiling Dampers are investigated to determine that the substitution of the ceiling damper does not reduce the hourly fire resistance rating of the assembly. Ceiling dampers are not assigned hourly ratings.

Fire resistive assemblies are investigated in accordance with UL263. After the ceiling assembly has been investigated, each floor-ceiling and roof-ceiling assemblies receives its own UL assembly design number.

CEILING DESIGNS

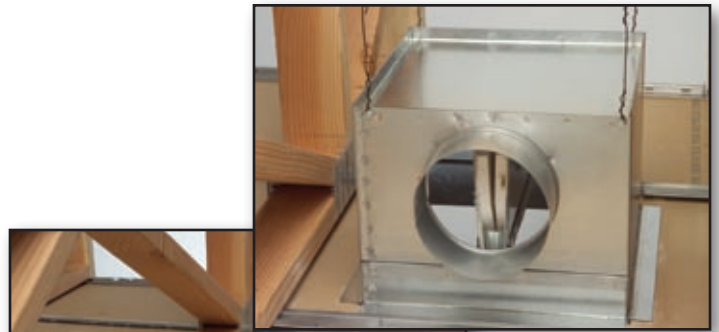
UL ceiling design numbers are actual tested hourly-rated fire resistive floor-ceiling and roof-ceiling assemblies. Each design shows construction, materials, and penetrations allowed in each design. Each manufacturers listed product may be installed as shown on their design. (L586 and P548)

FIRE RESISTANCE MATERIAL CONSTRUCTION

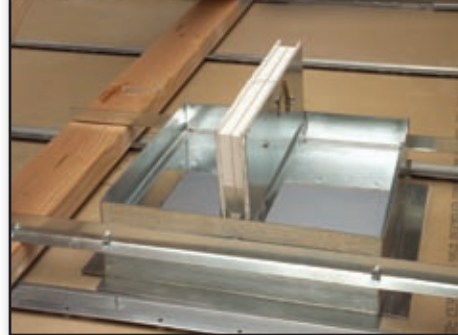
Floor-ceiling and roof-ceiling assemblies constructed per the "International Building Codes" Chapter 7 may be constructed similar to UL designs, should have the local authorities approval for the damper model and installation

NON-UL DAMPERS

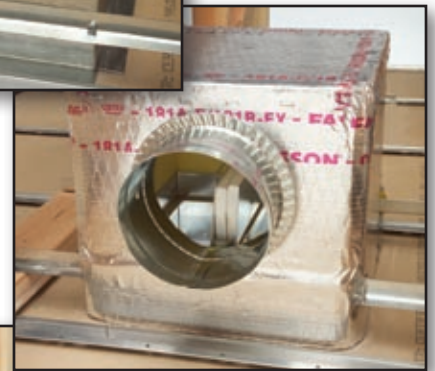
Warnock Hersey and ARL testing labs test UL approved ceiling radiation dampers in optional ceiling designs and are labeled with ARL or Warnock Hersey labels. Not all areas of the country accept non-UL labeled products and all should have the local authority approval prior to installation.



Insulated (R6/R4) or Non-Insulated Steel Plenum Box



Unducted



Ductboard Plenum Box



Steel Boot



Insulated Plenum Wood Joist



Insulated Plenum Steel Joist

NONDUCTED OR FLEX DUCT INSTALLATION

APPLICATION

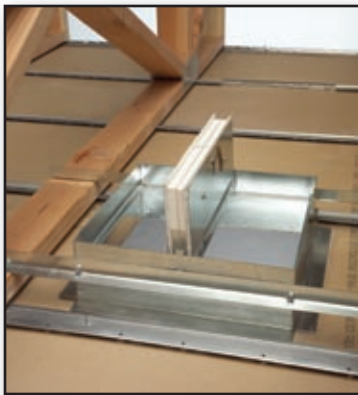
Non-ducted installations are used when the floor/ceiling or roof/ceiling cavity space is used as return air plenum which ductwork is not required. Also flex duct may be connected directly to the damper to eliminate the use of expensive insulated plenum boxes or boots.



Through Penetration

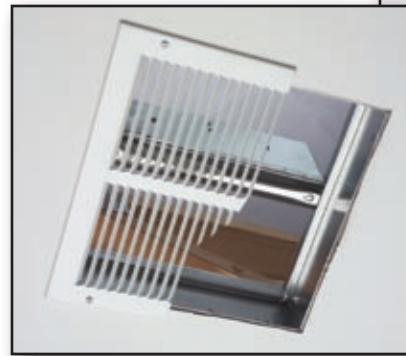


Grille with
2 1/2" OBD



Installation 1

CFD7T can be attached to angles resting on top of the bottom cord of the truss.



Surface Mount Grille



Installation 2

When the webbing of the truss interferes with the mounting angles, bend a leg up on the angles and attach to the sides of the trusses.



Installation 3

The CFD7T may be suspended with steel wires from steel angles or 2"x 4" attached to the top cord or the webbing of the trusses.



Note: installation depict standard installations, combining installation is permitted.

R4 OR R6 DUCTBOARD

APPLICATION

In areas where the duct is required to be insulated with either R4 or R6 insulation, the CFD7T can be factory or field supplied with R4 or R6 ductboard plenum or steel plenum with duct liner.

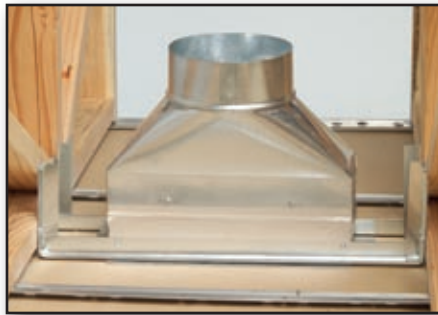


CFD7T insulated plenums may be supplied with side, end or top duct connections from 3" to 10" dia.

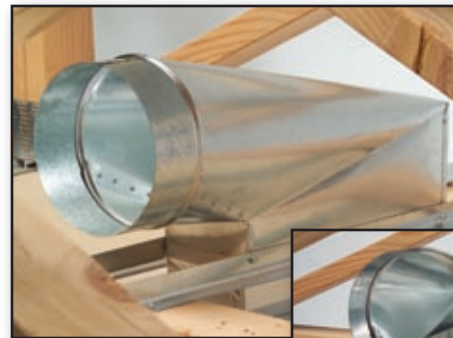
STEEL PLENUM BOX

APPLICATION

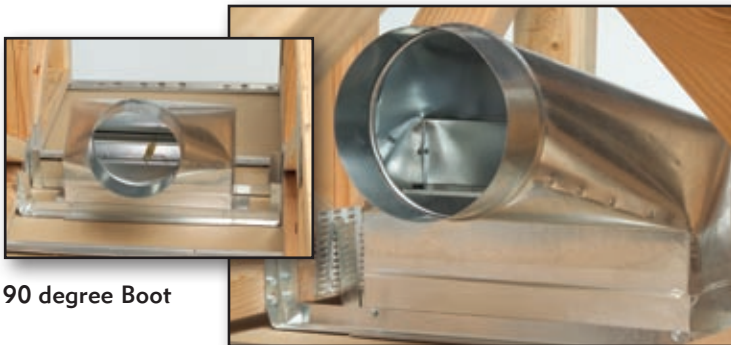
CFD7T can be supplied with various styles of steel boots or steel plenum boxes. Steel boots from a local supply house may be utilized with the CFD7T.



Straight Boot



End Boot



90 degree Boot



Steel Plenum Box with or without Duct liner

THROUGH CEILING MEMBRANE PENETRATION

APPLICATION

CFD7(T) is the only UL approved radiation damper that can be used as supply/return air plenum to connect to AHU unit below the ceiling assembly.



Ductwork may be connected directly to the bottom side of the CFD7(T) from the AHU below. Retaining angles are utilized in lieu of steel grille flange that cover the gap in between the gypsum and the CFD7(T).

WOOD JOIST

APPLICATION

CFD7 is the first Ceiling Radiation Damper to be UL listed for 2" x10" or 2" x 12" wood joist assemblies (Ref. L501). The CFD7 is listed on 21 different UL rated ceiling designs.



CFD7 can be supplied with or without a steel plenum box. The plenum is to be insulated in the field (Insulation is factory supplied).



STEEL JOIST

APPLICATION

CFD7 is the first Ceiling Radiation Damper to be UL listed for steel joist assemblies (L524).



CFD7 installs with angles attached to the sides of the joist. Angles may be factory or field supplied.

TRUE ROUND CFDR7T

APPLICATION

CFDR7T is the first True Round ceiling radiation damper UL approved for wood truss assemblies. The CFDR7T eliminated the use of expensive plenum boxes or boots. Now with this true round radiation dampers, architectural round diffuser with volume control may be used in place of square or rectangle flush mount diffuses.

Ductwork may be connected directly to the bottom side of the CFD7(T) from the AHU below. Retaining angles are utilized in lieu of steel grille flange that cover the gap in between the gypsum and the CFD7(T).



CFDR7T

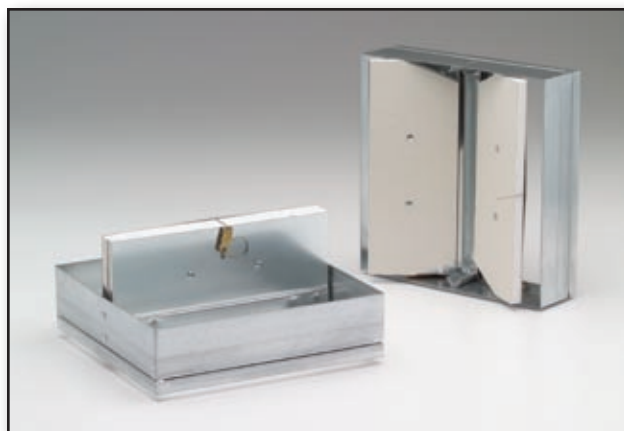


STANDARD CEILING FIRE DAMPERS

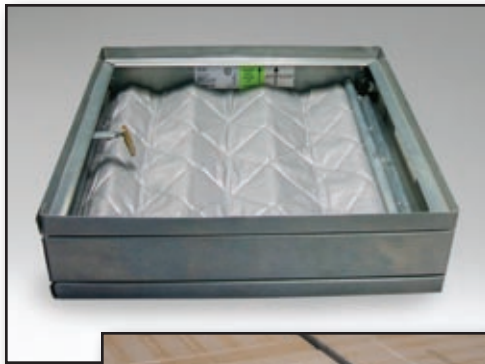
APPLICATION

UL Fire Rated Floor/Ceiling assemblies and Roof/Ceiling assemblies require specially tested and classified ceiling dampers to provide fire and heat protection where HVAC components penetrate the ceiling membrane.

Conventional fire dampers, which stop the spread of flame but DO NOT stop heat, are unacceptable for protecting fire rated ceilings.



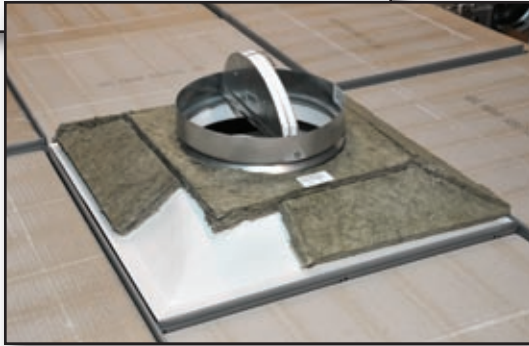
Ceiling fire damper may be installed in floor/ceiling and roof/ceiling assemblies with fire ratings of 3 hours and less.



CFD8
Thin Line
ceiling fire
damper



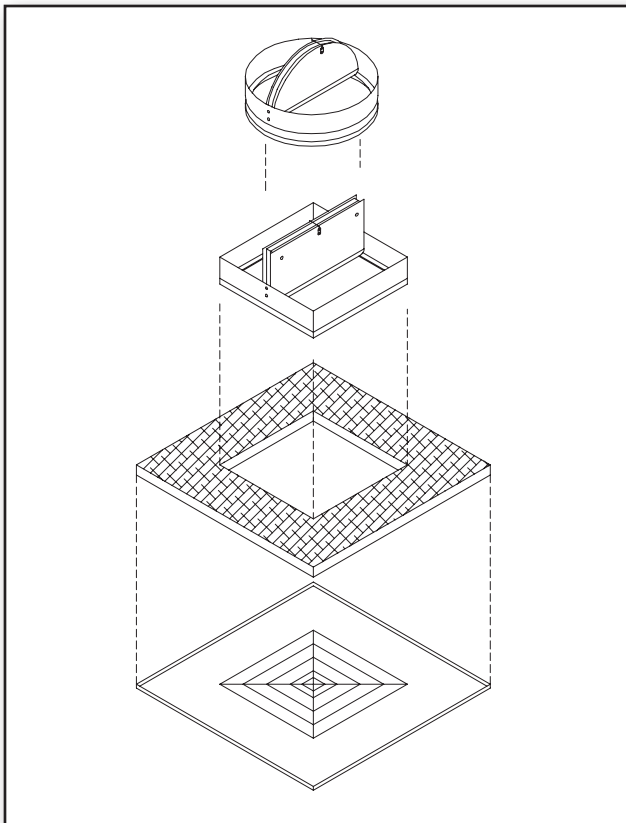
CFD(R)2, CFD(R)3
and CFD4 ceiling
fire damper
for surface mount



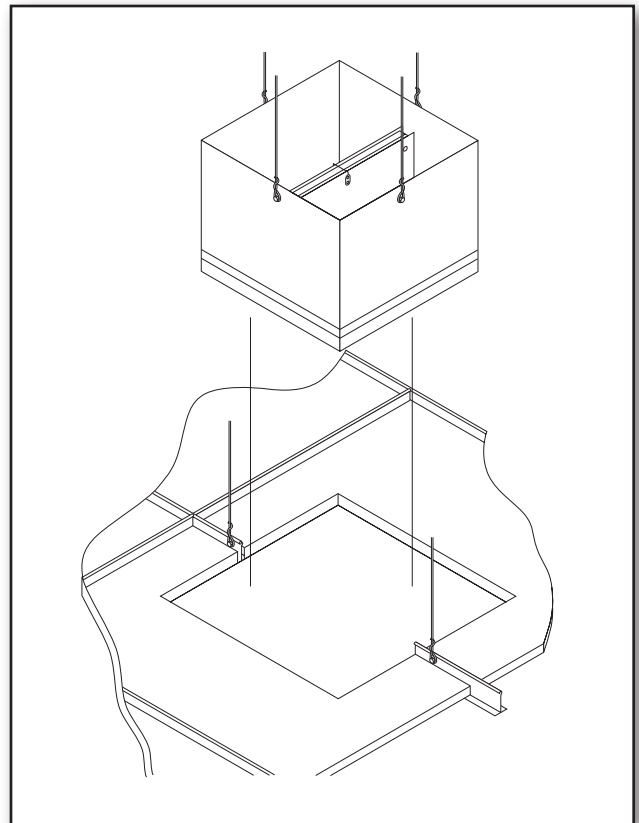
CFD5
For lay-in ceiling application



INSTALLATION



Lay-In



Surface Mount

SOLUTIONS

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Our Products

- Fire & Smoke Dampers
- Louvers
- Industrial Dampers
- Control Dampers
- Sound Control
- Air Measuring Products
- Air Doors

RUSKIN STOPS FIRE

Ruskin's 25 series true-round fire and combination fire/smoke dampers withstand high pressures and velocities due to their construction strength and provide excellent pressure drop performance.

Stop fire before it spreads with Ruskin's 25 series true-round dampers!

Features

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News

- New UL Approved Breakaway Connections
- Ruskin Acquires NRG Industries
- A Note From Our President
- Ruskin leads the way on UL Approved Fire/Smoke Damper Sealants
- Ruskin Introduces New Electronic Air Measuring Station (EAMS) The "Scoop"
- Ruskin's New EME745 Wind Driven Rain Louver: Pleasant That Makes Sense!
- Critical IBC Code Changes Require IAQ Control and Low-Leak Dampers

Other Ruskin Companies

Ruskin Sound Control Swartwout RSI Rooftop Systems, Inc Lau Industries

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Minimum System Requirements | Legal

ISO9001 CERTIFIED

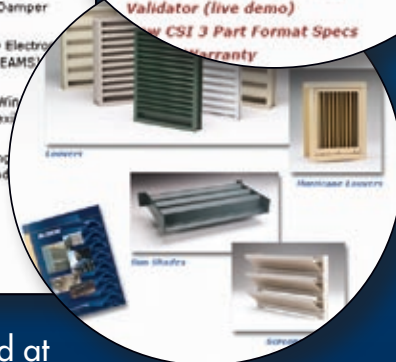
Fire & Smoke Dampers

Ruskin has worked closely with HVAC professionals to develop the most extensive line of fire, smoke and combination fire smoke dampers in the industry.



Quick Links:

[FSD Application Guide](#)
[FSD Literature](#)
[Frequently Asked Questions](#)
[Validator \(live demo\)](#)
[New CSI 3 Part Format Specs](#)
[Warranty](#)



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- Product Literature
- Installation Instructions
- 3-Part Guide Specifications
- CAD Details
- News & Articles
- Case Studies
- Electronic Tools
- And much, much more

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